

***State of Texas Response to  
FCC Public Notice Seeking Comment on  
The Transition Process for 700 MHz Public Safety Waiver Recipients  
(DA 12-555, released April 6, 2012)***

**PS Docket No. 12-94**

**Submission Date: April 20, 2012**

The State of Texas appreciates that the Public Safety and Homeland Security Bureau (Bureau) initiated the Public Notice (DA 12-555, released April 6, 2012) facilitating an open dialog on the important issues. These regard how to most effectively manage the transition from the existing Waiver Recipient programs to a program managed by FirstNet, as established by the *Middle Class Tax Relief and Job Creation Act of 2012* (Spectrum Act).

The State of Texas recommends the FCC immediately adopt, and that NITA and FirstNet support the following transition process:

- 1) Issuance of a license for both the existing public safety broadband spectrum with the additional "D Block" spectrum (758-769 and 788-799 MHz) to the First Responder Network Authority ("FirstNet"), upon notification from FirstNet that it is prepared to accept such a license. This should be by modification and assignment of the license currently held by the Public Safety Spectrum Trust (PSST) or through a new authorization, in either case conditioned upon FirstNet's assumption of the leases between the Waiver Recipients and the PSST;
- 2) Re-affirm the waiver authorizations granted to the Waiver Recipients and issuance of such additional waiver authorizations as the FCC determines are in the public interest and consistent with the objectives of the Spectrum Act;
- 3) Renew each of the Waiver Recipient leases for an additional two-year term with a continued expectation of further renewal; and
- 4) Approve the *Texas Interoperability Showing, v9* no later than April 30, 2012, and others from Waiver Recipients as the Commission determines satisfy its requirements.

It may well be two years or more before FirstNet is able to be established, completes system planning, undertakes procurement, and begins deploying a network. In the meantime, as discussed more fully below, there is much to be learned and a great deal of benefit to be had from allowing the 21 early builders to continue their efforts. On the other hand, if the Leases are not extended, the early deployments will come to an indefinite halt, the extensive efforts of the 21 early builders will be frustrated, funding may very well be lost, specific jobs will be lost and potential users may become disillusioned. In addition, significant costs will be incurred by the Waiver Recipients as a result. At a minimum, if the Commission chooses not to continue the Leases for a full two years, the Commission should still transition all of the Leases to FirstNet with an extension of the existing term to remain in

effect until such time as FirstNet is up and running, has adopted technical and interoperability standards, and is in a position to make a decision on continuing the Leases.

In extending the Leases and transitioning them to FirstNet, the Commission should also make clear that the Leases allow use of the additional 10 MHz of spectrum (the D Block spectrum) that Congress has allocated to the public safety national broadband network. The legislation reassigning the D Block to public safety envisions construction of a single network using the full 20 MHz of spectrum. Accordingly, use of the full 20 MHz of spectrum should be included under the leases.

As part of the Congressional scheme set forth in the new legislation and consistent with current Commission rules, the Commission has full authority to extend and continue the leases with the early builder jurisdictions as part of the process of transitioning the public safety license to FirstNet.

In making its determination on whether and how to continue the leases as part of the transition process, the Commission's decision should be taken in light of what best meets the public interest. For the reasons set forth in these comments, the public interest warrants a two year extension of the leases, with the addition of the D Block, as part of the license assignment. It is not realistic to expect the FirstNet Board to be in a position to adequately address the leases by September of this year when they will expire. Under these circumstances the Commission must act now to fulfill its mandate under the statute. Unless the Commission extends the leases as part of the FirstNet license assignment, the Waiver Recipients will be left in a state of uncertainty with no resulting public interest benefit. In a worst case scenario, the leases will expire in September 2012, defeating the test bed approach recognized by the Commission to be in the public interest in approving the waivers originally. Accordingly, the Commission should extend the leases as part of the transition of the license to FirstNet.

It is critical to the success of FirstNet to continue support for the progress being made by the Waiver Recipients with the understanding that these 21 early builders are the initial phase of a nationwide effort. The Waiver Recipients have invested extensive time, funding and resources of their own in the planning and organization of early build-outs. These initiatives are beginning to yield benefits and results, providing a wealth of valuable information about best practices and lessons learned for broadband wireless deployments—information that will be critical to the success of FirstNet. Curtailing the work at this juncture will prematurely and unnecessarily end the ability to learn from these efforts, and will potentially frustrate, at least for a period of time, the progress that these early deployments represent towards achieving a successful nationwide public safety broadband network.

**Accomplishments of the Waiver Recipients to date include:**

- Development of regional and/or statewide plans;
- Generating enthusiastic support with local, State and regional public safety agencies;
- Early planning of interoperability requirements that can be used as case studies for FirstNet;
- Experience in collaborating with industry and local jurisdictions in building LTE systems;
- Outreach/ education efforts to first responders who will serve as the FirstNet user base;
- Experience navigating through political and legal issues in planning and implementing these networks;
- Developing best practices for ensuring that service meets operational needs, including information regarding operational impacts, priorities and unique security requirements.

- In partnership with the Bureau, DHS-OEC, PSCR and the OAC, a National Numbering Administrator was selected, procedures and policies produced and initial Network Identifiers were assigned. This work was performed to be entirely migratable to a nationwide operation and represents a significant problem solved for FirstNet.
- Establishment of a single PLMN ID for Public Safety developed in partnership with ATIS, PSCR and public safety users for a process to obtain authority to utilize this critically important identifier. This work was performed in strict compliance with the FCC's *Common PLMN ID Order*.

*Responses to specific questions are provided below.*

***We seek comment on the most expedient and cost-effective way to transition the Waiver Recipients' authorizations. What actions should the Commission take to effectuate the transition?***

The Commission should transition all of the Waiver Recipients' authorizations coincident with the issuance of the license to FirstNet. Specifically, the Commission should issue the license to FirstNet subject to the Waiver Recipients' existing leases, with FirstNet taking on the rights and obligations of the PSST under the leases.

Such an approach is entirely consistent with the Spectrum Act, which states only that the Commission must license the spectrum to FirstNet; it does not address or otherwise limit the Commission's ability to issue the license subject to the existing leases. Large-scale networks commonly start out deploying in a relatively small subset of locations, allowing the builder to work out technical and operational issues.

Transitioning the leases with the issuance of the license would meet with the overarching policy of the Spectrum Act by retaining for FirstNet the ability to gain the greatest benefit from the work of the Waiver Recipients.

In the event that the license does not issue to FirstNet prior to the expiration of the leases, the Commission should allow renewal of all of the leases for a new lease term. At the time that the license issues to FirstNet, FirstNet would assume the leases as described above. It serves no purpose to permit any of the leases to expire against the will of the Lessee, particularly those who understand the risks and are self-funded, which includes the State of Texas.

***Should the Commission issue a stay to halt deployment by the Waiver Recipients in order to avoid additional costs being incurred by the Waiver Recipients?***

ABSOLUTELY NOT! The State of Texas and other Waiver Recipients have a verifiable Public Safety need, and will incur *more* expenses by having to suspend operations, and then restart deployment programs sometime in the future.

***It appears that jurisdictions such as Charlotte and Texas that plan to go into service in the coming months may be differently situated than other Waiver Recipients because their deployments will bring public safety benefits in the very near term. Should these parties be treated differently because they plan to enter into service shortly, or because they have already expended substantial funds?***

Recognizing that a variety of factors should be considered, the State of Texas submits that yes, the amount of funds and effort expended by a Waiver Recipient thus far should be considered as a factor in determining policy. This is because the decision to suspend deployments is at least partially driven by an

overall cost analysis and therefore how much the program has expended in totality, not just on LTE equipment, needs to be considered. As noted above, the State of Texas will incur a much greater expense by stopping now than continuing, even considering potential 'stranded equipment' risks of the future.

The State of Texas believes that all of the Waiver Recipients' systems capable of going live prior to the establishment of FirstNet should be allowed to continue. The State of Texas agrees that there are immediate Public Safety benefits. The State of Texas would like to emphasize that all entities should be treated fairly, and based upon a consistently applied, data-driven policy.

More specific reasons for this position include:

- The State of Texas and its deployment partners fully understand and have accepted inherent interoperability and cost risks in communication with the FCC on March 20, 2012 specifically addressing this issue.<sup>1</sup>
- The State of Texas, in close partnership with Harris County, has pursued the request for authorization to operate in earnest for almost a year. The State has filed nine versions of the *Texas Interoperability Showing*, two formal clarifications, over 1500 pages in documentation, a risk acknowledgement statement, and addressed over 100 issues presented by the Bureau. This effort was done in good faith. The State of Texas has now completed and addressed all requirements established by the Bureau. It is our expectation that permission to operate will be granted expeditiously. As such, the Commission should move immediately to approve the *Texas Interoperability Showing, v9*, no later than April 30, 2012.
- Texas provides an invaluable test bed which reduces FirstNet risks, at no cost or risk to FirstNet.
- Texas is not using NTIA, BTOP or other direct federal funding for our deployment.

***Alternatively, should the Commission decline to act on the interoperability showings for Charlotte, Texas or Adams County, because of the impending transition?***

No! The FCC should approve the interoperability showings submitted based upon the various orders through July of 2012. Conversely, Waiver Recipients who submit Interoperability Showings after July 2012 should submit their request based upon the requirements developed by the FCC Technical Advisory Board (TAB) due on or about June 22, 2012.

***What would be the impact to FirstNet if the Commission did authorize these waiver recipients to enter into service?***

The State of Texas believes that FirstNet, law enforcement, firefighters, EMS entities, as well as the general public would all see benefits if the Commission authorized Waiver Recipients to enter into service. Authorizing the State of Texas and others to enter into service will provide the FCC, NTIA and FirstNet significant technical, operational, procedural and governance data, all at no cost to these Federal organizations. As such, the FCC should NOT cancel waivers for any current deployments. Specifically, costs incurred by The State of Texas / Waiver Recipients are their own responsibilities and they should be allowed to make decisions based upon local needs and funding criteria. If the jurisdiction is using grant funds of any kind, it is the responsibility of the individual jurisdiction to meet the grant criteria. The FCC should not intervene in these matters.

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<sup>1</sup> <http://apps.fcc.gov/ecfs/document/view?id=7021902313>

As described in the Texas Interoperability Showings, and as executed by the State's experienced PS LTE management team, the State of Texas adheres to mature philosophies associated with large, complex system build-outs. The State notes that pilot programs are essential to the success of the larger whole.

**Reasons to Retain the Authorizations:**

- The Waiver Recipients have invested extensive time and resources in the planning and organization of early build-outs. This work provides a wealth of valuable information about best practices and lessons learned for broadband wireless deployments—information that will be critical to the success of FirstNet.
- Waiver Recipients are ahead of the deployment curve, having already developed regional and/or statewide plans and governance structures, and generated enthusiastic support with their local, State and regional public safety agencies.
- Public safety users in these jurisdictions have invested substantial time, internal finances and effort towards making the early deployments a success, having the expectation that these services will be available soon in these areas. While the expectation is that these early deployments will be part of the national network, these users are not prepared to wait for the national deployment, which could be several years away.
- The Waiver Recipients represent a series of initial success stories that will help to generate support for and buy-in to FirstNet.
- Waiver deployment experiences can be leveraged by FirstNet and the public safety community to help minimize risks associated with such a large project. Waiver jurisdiction field experiences help provide FirstNet with first-hand information pertinent to a nationwide buildout and therefore helps lower the overall risk for FirstNet. Early waiver deployments allow FirstNet a cost-effective way to extend its research "laboratory" beyond Boulder. By utilizing the waiver jurisdictions' efforts and capital investments already made, FirstNet can avail itself of real-world public safety operational experiences using broadband tools to help protect life and property that simply cannot be attained solely in a laboratory.

***Are there network architectures that the Waiver Recipients who wish to initiate service could utilize that would impact the costs of the transition to FirstNet?***

Since the regulatory mandate to use 3GPP Release 8 has been established by the Commission, the capabilities for migration from small regional to a large, nationwide network are either embedded in the standard or managed effectively using industry Best Practices for network design and evolution.

In short the State of Texas concurs with the expert analysis that the costs of migration, transition and deployment will be substantially reduced for FirstNet by allowing Waiver Recipients to continue. The State of Texas, following recommendations from those on 3GPP and LTE committees, employs proven architectures that can easily, and at very low cost, be adapted to most any architecture and topology(s) ultimately selected by FirstNet.

*What are the costs or other impacts, including lost near term public safety benefits, if the Commission fails to authorize these waiver recipients to enter into service?*

**Input from City of Fort Worth, Texas:**

North Texas needs to be allowed to continue deployment of its purchased LTE system as a component of the Harris County System. Not only will this deployment provide a critically needed capability for public safety but also it will provide a critically needed test bed for the state and nationwide build out.

With a population of more than 6.6 million and more than 230 independent jurisdictions in the region, the deployment provides the catalyst for the development of the regional architecture, governance organization, as well as process and procedures to ensure a truly interoperable network. The build out is already bearing fruit in the region with jurisdictions working together. The regional core purchased by the City of Fort Worth and the City of Irving purchasing eNodeB sites to provide coverage throughout that jurisdiction using the regional core. Additionally the regional core will be connected to the Harris County core to be consistent with the anticipated State architecture and nationwide build out. Two eNodeB sites will provide coverage at Texas Motor Speedway where more than 200,000 fans gather for events which challenge the current commercial network. These sites will significantly improve the capabilities of Public Safety as soon as fully operational. The build out in this region will provide positive operational capabilities for public safety and tremendous lessons learned for the region, state, and nation. Additionally, the build out is generating a growing interest in public safety broadband as evidenced by other entities who have begun asking for information and indicated interest in participation – such as one of the regional emergency ambulance services and county law enforcement. Finally, at this time of year the region is susceptible to severe weather events such as tornados and these events routinely adversely impact the commercial networks due to capacity almost more than physical damage. Having a robust public safety network in place as the primary network but with the roaming capability to leverage the commercial network if available would be the best of all worlds, improving the networks' resiliency tremendously. This initial build out also provides the foundation and a center for excellence for jurisdictions to learn and understand the capabilities as well of the issues involved in a LTE public safety network so they understand how to participate effectively.

The equipment being deployed is consistent with the LTE interoperability standards that current waiver jurisdictions are using. Although there is a risk that FirstNet will change or modify these standards, this is mitigated by the fact that it is very likely any change can be implemented through software/firmware upgrades allowing migration to the new standards.

Local North Texas jurisdictions have provided the funding for the initial deployment and should be allowed to move forward. Deployment is consistent the technology standards and process standards that are being developed. North Texas is committed to continuing to work with the State and FirstNet to integrate the regional core into the nationwide network. The existing processes to include the interoperability showings ensure that the region is moving in a direction consistent with the nationwide build out.

Having an operational system will allow validation of technology, process and procedures. It will allow operational use by public safety agencies to help identify real world requirements and prove for a better nationwide build out.

**Input from Harris County, Texas:**

The County has relied heavily on our relationship with the Houston Ship Channel Security District as a funding partner for the LTE broadband project. To date the district has provided significant funds toward the match requirements of the 2006/2007 Port Security Grant awards.

The district had the vision to see the potential the Public Safety Broadband Network would provide its members and the agencies which support and respond to their security and safety needs. The district has also implemented an extensive video surveillance system up and down the Houston Ship Channel, monitoring critical infrastructure to shipping and refineries. The enhanced situational awareness provided by the ability to stream live video from these sources across the broadband network to responding agencies in the field will be an invaluable benefit to the district. Based upon this vision and plan, the City of Baytown, Houston Metro and other municipalities have held back on plans to replace their aging mobile data systems in anticipation of this Public Safety Broadband Network. Houston Metro plans to use the network to provide a safe and secure transportation system for the citizens of Houston and surrounding areas. Delaying or restricting access to this needed resource will add undue risks.

**Input from City of Irving, Texas:**

The capabilities outlined below will be delivered by the planned PS LTE build-out therefore, if the waivers are cancelled, the City of Irving users will not have the benefit of the following services:

- **Planned Advanced Data Applications** – Providing services such as: Real-time Digital In-car video, In-building GPS tracking, School / Public area video surveillance, Real-time Warrant Statuses, In-vehicle Suspect Mug shot/BOLOs
- **In-vehicle Enhanced Business Intelligence Application** – Providing real-time intelligence to officers in the field for their beat and surrounding areas, which provides highly detailed situational awareness allowing them to be much more effective. This application will also provide real-time support of fire personnel for water pressure from SCADA system.
- **City-Owned Asset – Internal Management / Control** – Increased Bandwidth for future application which current infrastructure will not support, Security Management, Interoperability with DFW municipalities, counties, and state and federal government agencies, Quality of Service, and Application Management.
- **Service Enhancements** - Enhanced safety and security, Improved government productivity, Economic development, Digital inclusion, Improved services to citizen, Intelligent transport, Traffic management, Remote management-public utilities, Emergency response, Interagency communications, Lower telecommunication costs

The City of Irving has been working on the design/ RFP/ deployment for a citywide wireless infrastructure since 2006. The deployment of our City Wide Communication System which consists of a new Project 25 Radio Communications system, an LTE network and a fiber optic backbone design so that the LTE system will utilize infrastructure that will be used for multiple systems so that cost and bandwidth efficiencies are achieved.



The convergence or consolidation of the communications infrastructure will provide:

1. Reduced Number of Devices Carried and managed by PS Users
2. Reduce Cost of Total System
3. Best Access Solution / Location/ Bandwidth
4. Reduce Management Total Cost of Ownership
5. Reduce Security Holes
6. Increase Efficiency/Productivity
7. Boost Workforce Effectiveness
8. Application Demand – Voice/Data/Video Multimodality
9. Reduce Chances of Failure
10. Provides opportunities for System sharing through multiple agencies and jurisdictions

***Input from the State of Texas:***

As a state which has historically led the nation in annual federally-declared disasters, Texas is dedicated and committed to statewide cooperation and a collaborative effort in building and operating public safety LTE infrastructure to provide the highest level of prevention, protection, response, and recovery from acts of terrorism and other catastrophic events in the State and nation.

On April 3, 2012, sixteen tornadoes hit the Dallas/Fort Worth region. The storm caused severe congestion on the commercial cellular systems which provide data service to Texas Department of Public Safety and other first responders, rendering their primary data communications system unusable. The planned LTE system for this area would not have experienced similar problems.

Since 9/11 the federal government has pushed for communications systems that can interoperate and function during disasters and LTE is clearly a key technology. Texas is in a position to move forward, with multiple agencies within the State having the technology, funding, and ability to deploy these systems today; however withholding interoperability showing approvals and revoking waivers only puts the public in greater risk.

***One possible approach would be to rescind all of the waiver authorizations. What would the impact-include cost be to the Waiver Recipients of such an approach?***

As significant funds have already been expended, the impact for Texas would be significantly greater than the perceived risk of 'stranding' equipment. The cost to stop and discard equipment does not compare to the cost to release, rehire and retrain program personnel.

There is no additional cost or risk to the federal government for the Texas PS LTE efforts to continue during this transitional period.



*Could the cost impact be minimized in any way? For instance, could we rescind the waiver authorizations of only those jurisdictions who have not yet expended significant funds? Is there another method to achieve the same objectives, while minimizing any adverse impacts?*

Working in a team approach between vendors, Project Managers, Waiver Recipients and user, costs and risks can be effectively managed. It is the position of the State of Texas that all Waiver Recipients and Early Builders should be allowed to proceed AT THEIR OWN RISK.

Our calculations, supported by industry experts, show that the amount of taxpayer dollars which would be wasted with the suspension is roughly three times the LTE equipment cost. **It should be noted that the “stranding” of LTE equipment is a perceived risk, while the suspension is a real and immediate loss of the sunk costs and likely layoffs directly attributable to the Commission or NTIA.** Virtually all of the potentially ‘stranded equipment’ in question is software-based and/or 3GPP compliant, and as such is not likely to be ‘stranded’.

*We also recognize that the initial term of the May 2010 Waiver Recipients' leases will end in September 2012, shortly after the August 20, 2012 deadline for establishing the FirstNet board. Is there an appropriate way to transition their authorizations coincident with the end of the lease term, or coincident with the issuance of a license to FirstNet? Is such an approach consistent with the Spectrum Act?*

Normally, when the FCC authorizes transfer of spectrum licenses, all leases associated with the license also transfer. We recommend the same process here – that when the FCC transfers the spectrum license from the PSST to FirstNet, it also transfers all leases and waivers to FirstNet as well, for a two-year period as specified in the original waiver order. Individual lease-holding jurisdictions could opt not to renew their leases with FirstNet.

For various reasons, the FCC may not be able to transfer the license (and therefore the leases) to FirstNet coincident with the PSST lease end-date. If this is the case, the State of Texas believes the only fair approach is that the FCC should extend the license of the PSST and authorize extension of each lease with the PSST, with a lease fee pro-rated to the PSST based upon the term of the lease.

*Should the Commission simply allow these leases to expire or decline to renew them?*

NO! The State of Texas concurs with the PSST Operators Advisory Committee (PSST OAC) position, provided in OAC response to this notice that the leases should not be allowed to expire. Ideally the leases should be continued, extended and renewed for two years in the first meeting of the FirstNet board. To not do so, creates unnecessary legal expenses, uncertainty and delays.

Additional support comes from the PSST OAC, who noted that the Commission should not allow the leases to expire. Every lease-and-waiver-holding jurisdiction has demonstrated a need for the public safety network. Many jurisdictions have also expended considerable time and funds for planning for deployment. In at least nine cases, this includes RFP preparation and evaluation, equipment purchases and related activities. All of these costs will be stranded and lost if the leases are allowed to expire.

***Should the Commission allow renewal at the option of FirstNet? Should the Commission allow all or some of the leases to be renewed with the PSST, and then transferred to FirstNet at an appropriate time? Should such lease renewal terms be for a more limited duration than the initial two-year lease? What term?***

A number of the waiver jurisdictions have expended considerable time and money to plan and build their networks, and have secured funding to do so. In addition, each jurisdiction has built a set of local elected and senior officials in support of their work. This remarkable progress was accomplished as a result of the May, 2010, FCC Waiver order. Therefore we believe the FCC, to preserve these investments, should transfer the leases to FirstNet with a very strong recommendation that they be maintained intact for two years, an action consistent with the way the FCC treats other license and lease transfers, and consistent with the original FCC waiver order. This two year period also allows FirstNet to organize itself, create a nationwide architecture, prepare, issue and evaluate RFPs, all of which is consistent with the Spectrum Act. The work of the Waiver Recipients to construct and operate networks will be invaluable input to these FirstNet activities.

### ***State of Texas Summary***

Maintaining the momentum begun by the Waiver Recipients is clearly in the national interest. This provides significant advantages to future PS LTE-enabled jurisdictions and to FirstNet. The State of Texas has committed to meeting Commission and FirstNet requirements now and in the future, as noted in the *Texas Interoperability Showing, v9* and associated documents. Early deployment efforts are already delivering tangible benefits by reducing risks, flattening multi-vendor testing into easily manageable efforts and identifying best practices. It is our sincere belief that being authorized to “Go Live” and operate a PS LTE system starting May 31, 2012 will provide a constant source of valuable insights to FirstNet and interested jurisdictions. The State of Texas pledges to share our knowledge and lessons learned with all interested stakeholders.

Most importantly, the State of Texas believes that PS LTE will dramatically enhance the State’s ability to protect the citizens of Texas. For this reason, among the many others stated in this document, we strongly urge the Commission to authorize the State to commence Public Safety operations on the 700MHz spectrum immediately.